1: Karsten--94-95 (1916-18) 1935 Jivaro
712 (1928-29)

"Since there are no openings serving as windows in the walls, narrow intermediate spaces of about two centimetres are left between the poles, through which the daylight filters. These cracks in the walls also allow the inhabitants of the house to look out and watch persons approaching; but on the other hand they may make it possible for enemy spies to watch the inmates of the house and even to attack them with natural or supernatural weapons. In times of war therefore the houses of the Jibaros [95] are specially fortified by means of extra walls and in other ways, as we shall see later on..."

l: Karsten--261-262 (1916-18) 1935 Jivaro-1
116, 342, 712 (1928-29)

"That the Jibaros are professional warriors also appears from the way in which they construct their houses and from the defensive measures to which they have recourse when particularly threatened by their enemies. The houses themselves are constructed with great care, and as we have seen, even in times of peace are provided with walls of strong chonta poles. When a family is particularly threatened by enemies the house is fortified in a special way. On the outer side of the ordinary wall another wall is made, consisting of big chonta stems, so that the house has two walls, one close to the other (Pl. X, 3,4). Within the houses, all along the walls, a number of small rooms or partitions, about 1 meter in height, are likewise made of chonta poles, each having a small hole in the outside through which the warrior can shoot his attacking enemy. There is one such small room for each defender of the house. The partitions will afford the warrior protection in case the enemies are able to penetrate into the house. As to the doors, there are two in each Jibaro house, one at each end of the house, one for the men, the other for the women. These doors generally consist of six chonta poles, the upper ends of which are united by means of strong lianas, while the nether ends are free and can be separated from each other, three to each side, making an opening of triangular form. The whole opening is so small, however, that only one man at a time with some difficulty can enter the house. During the night the poles forming the doors are always carefully closed and fastened by a transverse pole applied to the inner side,

so that the entrance of undesirable persons is made impossible. Even the outer wall in a fortified house has a special door consisting of similar poles, which can be closed from the inside.

Not only the houses themselves but also the manioc and banana plantations situated close by are protected in a similar way by high fences [262] of strong chonta poles. The aim of this arrangement is to prevent the enemy from approaching the house through the plantations.

Formerly, before the use of firearms was so general among the Jibaros as it is now, the chiefs especially were in the habit of constructing a sort of war tower at one end of their houses. These towers were of quadratic form and sometimes 20 or 30 meters in height. On the top of it there was a small room about 4 meters in quadrate and with walls about 1 meter in height, made of strong chonta poles, which protected the defender against the lances of the enemies. The whole thing rested upon pillars of the stem of the chonta palm, and the warrior ascended along a stair consisting of wooden logs with incisions which gave him foothold. These war towers were called kumbinta. After the Jibaros began to make use of firearms in their wars these measures of defence proved less fit for the purpose, and consequently were no longer used."

1: Karsten--262-264 (1916-18) 1935 Jivaro-1
116, 712, 411 (1928-29)

"It is still common among the Jibaros to arrange a kind of trap on the way which leads to the house and where one expects the enemy will try to approach it. One such trap consists of a round hole in the ground, about 1 1/2 meters deep and large enough for a full-grown man to fall into it. At the bottom of the hole three pointed sticks of chonta, resembling points of lances, are arranged in an erect position. These pointed sticks are called ashi. The part which sticks out from the earth has a length of about half a meter. At the surface of the earth the opening of the hole is covered with small sticks and leaves which makes it difficult or impossible for the enemy, creeping along in the darkness, to discover its presence before he falls into it. When he falls his feet are transfixed by the pointed sticks and he is not able to get out. Besides, the defenders of the house are often keeping watch at these holes, ready to dispatch the enemy when he is caught in them. The Jibaros call these traps mesértinyu whua, 'a hole of death'.

Another kind of trap, which likewise is arranged on the narrow path leading to the house, is the following: it consists of a small tree, growing close to the path, which is bent down, or of a big branch of a tree, one end of which is fixed in the ground so that with the latter it forms an angle of about 30°. To the upper end of this branch eight pointed chonta sticks are attached in such a way that they form as it were a comb. The branch is bent back like a bow against a couple of poles fixed in the ground for the purpose, to which it is attached by means of a strong liana in a certain ingenious way that

cannot be fully described in words. Across the path a few inches over the ground another liana is stretched [263] and tied at one of the poles just mentioned. Between this liana and the liana holding the bent branch there is such a connection that when the foot of the enemy touches the former, the bow is released, and the comb with the pointed chonta sticks will strike him with terrible force in the face or the chest. The liana stretched across the path is sometimes covered with leaves in order that the enemy may not notice it, but besides, even this weapon is calculated to operate mainly in the darkness, since the attacks are nearly always made at night. The trap described (Fig. 7) is called tambunchi by the Jibaros and singbraru by the Quichua-speaking Canelos Indians.

Whereas the tambunchi has been used by the Jibaros since ancient times, the following defensive measure is of modern origin. Across the path along which the enemy is expected to come a blackened string is stretched at such a height that it is level with a man's chest. At the tree where one end of the string is fastened a charged and cocked rifle is tied, with the barrel fixed in the direction of the string. The end of the string is fixed in such connection with the trigger of the rifle that when the enemy, coming along in the darkness, gives it a push, the shot is discharged and is likely to hit him in the chest. Even if he should [264] escape being hit, the shot would warn the inhabitants of the house that enemies are approaching."

2: Stirling--59
116, 712

(1930-1931) 1938

Jivaro-1

"The Jivaro house is generally constructed with an eye to defense. As a rule, a house is erected in a small clearing, one side of which either faces a steep mountainside or a river bank. The walls of the house are constructed of poles or slats set vertically in the ground and as close together as possible. The house has a door at each end, made by placing hewn planks side by side in a vertical position so that when closed both the upper and lower ends are fitted into a slot. In order to open the door, these planks are lifted up so that the lower ends come out of the slot and the butts are set to one side so as to make an entrance in the shape of an inverted V. These doors can be barred from the inside.

If a jivaría has reason to suspect that an attack is impending a palisade of balsa logs is set up around the house with small loopholes here and there between the posts to serve for observaion and to shoot through. The walls of the house itself are reinforced on the inside with posts about 5 feet high. At intervals along the trails leading to the house strong saplings are bent back, attached with strings leading across the trail with trap releases. Spears are attached to these saplings so that when the string is stepped against, the saplingwill react as a catapult, launching the spear into the body of the person releasing the trap. Deadfalls with pointed chonta sticks on the bottoms are dug at various strategic points. Frequently a trench with the bottom covered withchonta points in this fashion is dig entirely around the house. Great pains are taken to cover this nat-

urally, so as to make its location difficult to detect. Loaded guns with strings attached to the triggers are also set up here and there along the trails in the manner of the spear-catapults. Sometimes houses which are built near a river bank have concealed tunnels leading from inside the house through the bank to the edge of the river through which they can excape or send out messengers if badly pressed."

2: Stirling--60 (1930-1931) 1938 Jivaro
116, 712

"On the Casu, a tributary of the Apaga River, were two large abandoned jivarías, both strongly fortified by means of an inner wall 6 or 8 inches from the main wall standing about 5 feet in height, the intervening space being filled with small boulders gathered from the river bed, thus affording an excellent barricade in case of attack. Just off the end of the building which was evidently considered least vulnerable there was a small room barely 15 feet square which was protected on all sides in the same manner, but was raised about 20 feet from the ground, supported by four stout posts and placed conveniently near the little door of the main building so that one could at once step on a notched tree trunk and climb to safety, throwing the ladder away. These places are used for the safety of women and children in times of raiding and as a final refuge. Should the enemy try to climb to the hut, a shower of rocks is dropped down upon them, a supply being kept ready for that purpose. Climbing into one of these curious towers, it was found to have convenient niches in order that the occupants could command a complete view of the clearing on all sides and any Indian being fortunate enough to own a rifle and ammunition could easily hold at bay a strong force. However, the purpose of the structure is primarily as a protection for the women while the male occupants of the jivaría fight the enemy with their lances and shields."

12: Rivet--617-618 (no date) 1907 Jívaro
116, 712

When the Jívaro expects an attack he arranges a series of traps around his habitation: these are carefully hidden ditches where the enemy impales himself on sharp wooden sticks or perhaps they are automatic shooting arrangements made with the aid of vines. The aggressor, on touching one of them, sets off apparatus [618] and the skillfully arranged lances pierce him from all sides. (1)

When the menaced Jívaro is the chief of the tribe or a person of prestige, he constructs a very remarkable kind of a fort on the top of a hill where he can see a long way. Four enormous strong posts, 25 m. high, chosen from among the strongest in the forest, support a little room 3 m. square with a floor of strong wood, a roof like those in the houses, surrounded by a wall of chonta and caña one meter high. A big ladder is the only way of getting in. In this fort are placed an enormous tunduli, rocks to be thrown against the assailants, lances, machetes, implements of every sort, and occasionally a good Winchester rifle completes the armament. It is unnecessary to add that all the approaches are protected by numerous traps. (2)

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1. Vacas Galindo. Nankijukima, op. cit., page 66.
2. Vacas Galindo. Nankijukima, op. cit., page 68-69.

20: Dyott--156
116, 342, 712

(no date) 1926

Jivaro

"Kuashu's home, in all its rough simplicity, was exactly like every other Jivaro establishment. Amongst the dozens I have visited, I have never seen the slightest signs of originality exhibited in their construction. Except for size, they are all identical. The absence of an outer wall, sometimes noted, only indicates the poverty or laziness of the owner. With increase of family, it will be added and the dwelling made to conform to the universal standard. In the more unsettled areas, I have come across defence towers (kumbinta) built alongside the house, and it is not uncommon to see an extra row of short poles planted outside the wall about six inches away, with the intervening space filled with stones; but such things are merely additional safeguards against attack."

26: Brüning--52 [5] (1902) 1928 Jívaro
116, 712, 343

A special type of buildings are the battle towers which can be found in connection with certain dwellings. I did not see one of these battle towers close enough, but I saw them from a distance while travelling by. The dwellings which I inspected did not have any such battle towers. They are placed at a distance from the main dwelling, but are connected with the latter by means of a ladder, which consists of notched tree-trunks. The towers consist of four sturdy uprights, each one 8 - 10 meters high and placed in a square at a distance of three meters from each other. On top there is a platform, which is protected by a parapet (height: 1 meter) and a roof.

They have fortress-like structures (kumbinta according to Karsten) which look like towers (see my photograph on Plate 65. Pitfalls (tsi) with palm-wood points at the bottom are placed close to the paths. They have spearing traps (tanibunchi, Karsten) against enemies, very much like the spearing traps of the Saimaku (see p. 495 and Illustration 11 on Plate 88). Illustration in Karsten, Blood Revenge etc., Plate 2.

34:Harner E-4, 5 (1956-1969)1973 SD9 Jivaro SD9

Chapter II

SHELTER, SUBSISTENCE, AND TECHNOLOGY

533
539
926

I am like an anaconda.
No one can get near my house
Because there is a lake around it.
I am a jaguar,
The bravest that is,
And no one
Can get near my house.

Song by a man to his enemies
whom he believes that they are
about to attack

595 The center of Jivaro life is the individual house, normally
951 occupied by a polygynous nuclear family and surrounded by a garden in deep isolation in the forest. The house is typically built beside a small stream on a hillock where there are stands of soft or medium-hard wood. Such trees, especially palms, are easy to cut down to make garden clearings and are also preferred for house construction and firewood. The location of the house on high ground is not only better for drainage, but also furnishes a view across the surrounding garden to facilitate defensive fire in case of enemy attack (see Plate 1).

342 The dwelling is usually a large and well-made structure, oval in ground plan, with a single-gabled roof (see Figure 1). The roof is made of closely woven *kempanchi* palm thatch and is supported by nine center posts as well as by the smaller

• [712] house wall posts. The windowless wall is built of more closely spaced palm (*Guilielma* sp.) staves set vertically into the ground about an inch apart to permit light and air to enter,

/p. 41/ /text continues on p. 43/

34:Harner E-4, 5 (1956-1969)1973 SD9 Jivaro SD9

and to allow the inhabitants to see out and to fire at attackers. The interior of the dwelling is unpartitioned, constituting a single, long dirt-floored room with a doorway at each end. Floor plan dimensions of several houses were found to range from approximately 25 to 36 feet in width to about 40 to 60 feet in length. A representative house was 27 feet wide by 44 feet long with a maximum roof height of about 15 feet and with walls 7 feet high.

To protect the inhabitants from enemy attacks, the doorways (Figure 1, A, F) are closed with strong hand-hewn wooden doors or removable wooden posts locked into position with a crossbar. An extra layer of chonta palm staves is sometimes lashed to the house wall near the beds. This double wall covers the slits between the palm staves to protect sleeping members of the household from being shot by would-be nighttime assassins. If local feuding is at a particularly high pitch, logs may be laid horizontally against the inside of the house wall to form a breastwork about four feet high. Foxholes are also sometimes dug into the floor to permit firing from low points on the breastwork and to provide shelter for the women and children. A secret escape tunnel occasionally extends underneath the wall, coming up in the garden outside.

Houses ordinarily are occupied five to nine years, even though the gardens are abandoned more frequently, usually after three or four years' use. The chief reason given for abandoning the house after only five or six years is a scarcity of palm fire logs in the immediate vicinity. A dearth of wild game is often a supporting reason for early abandonment. If, however, palm logs and game remain plentiful, the dwelling is normally occupied until it starts rotting. The bases of the wall staves are usually the first parts to decay, but the house often is not abandoned until the roof begins to

34:Harner E-4, 5 (1956-1969)1973 SD9 Jivaro SD9

178 721 441 growth of inter-tribal trading partnerships, whose participants and their relatives have a vested interest in the maintenance of inter-tribal peace to protect the partners. Relatives of the traders threaten to apply sanctions against their own tribesmen if they should initiate war against the Achuara. The Achuara, who have the same interest in maintaining the trading system, similarly discourage inter-tribal raids against the Jivaro.

178 411 726 [342] [712] [714] Winchesters and shotguns have almost entirely replaced palm-wood thrusting lances as the chief combat weapons both for offense and defense. Formerly, spears thrown with the spear-thrower were used along with thrusting lances in attacks, while poisoned blowgun darts and double-pointed palm throwing sticks were used in household defense, the latter being cast from now vanished house towers. Round wooden shields, formerly universally carried in combat, are likewise no longer used in fighting, due to their inadequacy against guns. The use of shields is now restricted to rare ritual functions, especially in the *tsantsa* feast. Such ceremonial feasts have considerably diminished in size and frequency as a consequence of the decline in inter-tribal head-taking raids.

[796] [727]

178 342 411 712 726 Changes in house construction during the past few decades have been influenced primarily by the adoption of firearms for fighting. Formerly, the roof of the house was sometimes surmounted by a wooden defensive tower from which missiles could be showered onto attackers. Today such towers have entirely disappeared, since the use of guns by attackers only made the position of defenders in the towers untenable.

At the same time, the use of firearms has encouraged the construction of breastworks of horizontally placed logs inside of house walls as a protection against gunfire. The

34:Harner E-4. 5 (1956-1969)1973 SD9 Jivaro SD9

digging of foxholes in house floors is a related new development. The construction of double walls behind beds has become common to protect sleepers from assassins attempting to shoot between the palm staves of the house wall at night. The construction of escape tunnels has declined considerably since the lessening of inter-tribal warfare, for their prime function was to provide a means of escaping the wholesale attacks and sieges which only occur in the inter-tribal head-taking raids. Log signal drums are now also relatively rare, due to the adoption of firearms, whose discharge is sufficient in itself to alert neighbors when an attack occurs.

A decline has occurred in the last three or four decades in the numbers of pigs kept, which is ascribed primarily to the fact that *tsantsa* feasts now have become much less frequent due to the lessening of inter-tribal warfare. The raising of pigs was primarily directed towards having a large supply of meat for such feasts. The capturing and taming of wild animals and birds has increased, however, because of the demand for these by Jivaro trading partners to the west, who trade them to the whites of the frontier.

Hunting has become more important as an activity to procure skins and feathers for trade, although there is no indication that such specialized hunting has resulted in an increase of meat consumption in the household. The adoption of firearms has tended to increase the hunters' efficiency in killing rare birds, such as the toucan, which are prized for their plumage and are difficult to stalk at close range. Firearms also have facilitated the hunting of dangerous wild animals for their skins, especially the jaguar and peccary, which were formerly hunted with the lance.

Besides firearms, blowguns and curare dart poison are also utilized for hunting to a greater degree than was the case several decades ago. The intensified use of blowguns has